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cana. The fish had been caught in the Susquehanna River, at Duncannon, Pa. In the stomach there was found a large shell of *Lingula pyramidata*, which heretofore had not been discovered inhabiting our coast further north than North Carolina. The yellow Pike-perch was generally considered to be altogether a fresh-water fish. The presence of the lingula in the stomach would indicate that it was at least a visitor to the sea, and in the case of the present fish, probably as far down as the North Carolina coast.

December 16.

Dr. Carson, Vice-President, in the chair.

Twenty-four members present.

Remarks on Fossil Elephant Teeth.—Prof. Leidy observed that the fossil elephant teeth, presented this evening by Mr. Richard Peters, were obtained by him in Mexico. In appearance the fossils resemble some others, obtained in New Mexico and Chihuahua, referred to in his recent work, "Contributions to the Extinct Vertebrate Fauna of the Western Territories." All appear to have pertained to the coarse-plated variety of molars referred to a species by Dr. Falconer with the name of *Elephas Columbi*. Some of the specimens had been found in association with remains of the Mastodon, the extinct and near relative of the elephant.

The two genera were cotemporaneous, and were represented by many species during the middle and later tertiary periods, but no remains of either have yet been discovered in the early tertiary deposits. It is probable that both are successors from a common stock which existed at a period intermediate to that in which were formed the known eocene and miocene deposits. The elephant has survived the mastodon, as represented in the living species of Asia and Africa to-day. In this country, the comparative abundance and excellent state of preservation of remains of the mastodon in post-tertiary deposits, would apparently indicate that it had survived the elephant. The mastodon had the outward form and the general construction of the living elephant. Like it, it was a bulky, five-toed animal, with a long prehensile proboscis, and with long tusks to the upper jaw.

The molar teeth in the two genera differ in a striking manner, and so widely, that early observers thought those of the mastodon were adapted to a carnivorous habit. The actual number of molars is the same in both, but generally those of the functional series, or those in use at any one time, are more numerous in the mastodon than in the elephant. In this the molars are bulky, laminated masses inserted in the jaws without fangs. In the former the molars have distinct crowns, with prominent transverse lobes, inserted with long, strong fangs.

Notwithstanding the difference it is easy to see that one form is the derivative of the other, and it is probable that the elephantine form was evolved from the mastodont form, as the teeth of the mastodon are of a more ancient pattern or type, that is to say, they accord more nearly with the usual pattern of the molars of ancient pachyderms.

By simple multiplication of the transverse lobes of the molar crowns of the mastodon, contracting these lobes, elongating them so as to encroach on the position of the fangs, and filling the intervals with cementum, we have the elephant molars produced. The miocene stegodons of the Himalayas were elephants with teeth decidedly of intermediate character in these respects, with the true elephants and the mastodons.

This mode of complication of the molar teeth in the evolution of the elephant pattern from the mastodon pattern was a very common one among the ungulates. Most of the early ruminants, as Oreodon, Agriochoerus, etc., and the solipeds, as Anchitherium, had molars with short crowns and prominent lobes, inserted with fangs. Their successors, as exemplified in most living ruminants and the horses, have molars with long crowns, complicated in the same manner as we observe in the elephant as compared with the mastodon.

Nearly all our domestic herbivorous ungulates belong to genera having long-crowned, complicated molars, as exemplified in the elephant, horse, camel, ox, sheep, and goat. The deer retains the more ancient pattern of molars.

That the course of evolution was from the more simple to the more complicated type would appear to be confirmed in the fact that the temporary molars have proportionately shorter crowns and longer roots than in those of the permanent series.

The death of Prof. Agassiz was announced by the Chair, and a committee consisting of Drs. Le Conte, Carson, and Leidy was appointed to draft resolutions of regret.

DECEMBER 23.

The President, Dr. RUSCHENBERGER, in the chair.

Thirty-seven members present.

The following paper was presented for publication :—

"On Three New Species of Unionidæ of the United States." By Isaac Lea.

Prof. COPE made some remarks on fishes from the coal measures at Linton, Ohio. He stated that Prof. Newberry, Director of the Geological Survey of Ohio, had sent to him numerous